



GLAST Monthly PSR

Software

Erik Andrews
Software Systems

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Accomplishments



► **Spacecraft**

- *Reviewed PDR materials till cross-eyed; Including PDR DR2.*
- *Requirements derivation and decomposition to next level completed.*
 - *~ 80 FSW S/S Requirements → ~ 300 requirements in FSW Spec*
 - *Requirements entered and mapped/flowed in DOORS.*
 - *Held Peer Review for C&DH FSW (CDRL 13) on 4/17, 4/22, 4/23.*
 - *GNC (Not a deliverable) Requirements documents peer review to be scheduled.*
- *Software Development and Management Plan (SDMP) (CDRL 12) held on 4/15*
- *Software QA (SQA) Plan (CDRL 12a) held on 4/14.*
- *FSW Test Plan (draft) (CDRL 15) distributed Friday (4/25), peer review scheduled for later today.*
 - *Baseline draft version after the review*
- *FSW PDR Review Coordination between Code 300 (Mark Goans, Steve Scott), Project, and Spectrum Astro to define contents of SC PDR FSW Presentation and the FSW PDR (CDRL #21) immediately following.*
 - *Code 300 to chair the FSW PDR (Mark Goans).*
 - *Summary: Generally, SC PDR FSW presentation will 'skim' material from across the more detailed FSW PDR (~ 4 hours).*
- *IV&V beginning soon for their 60-day Startup Assessment.*



Accomplishments

► **Large Area Telescope (LAT)**

- *Snuck into the “Top 10” list. Potential to move up fast.*
- *Review of the Elex / DAQ / FSW / I&T CDR slides. Comments provided to Gunther and team.*
- *Note: Software Detailed Design only completed for EM1 FSW delivery at CDR time. EM2 and FU detailed designs will follow and include additional peer reviews (EM2 – Fall '03, FU – Spring '04)*
- *IV&V startup planned for this month. Final Agreement proving elusive.*

► **GLAST Burst Monitor (GBM)**

- *Requirements are mature. Interfaces are well known and understood.*
- *Reviewing interfaces to GBM ground systems – test fixtures, operations.*
- *No IV&V on the GBM.*

► **LAT – GBM ICD**

- *New document. Released earlier this week. After review iteration, turn over to Spectrum Astro for maintenance.*



Accomplishments



► **Spacecraft Instrument Interface Simulator (SIIS)**

– *GBM: Demonstration and Acceptance Test held during PDR DR2 (4/24)*

- *GBM SIIS requirements / design understood and acceptable to both Spectrum and Marshall teams.*
- *Spectrum experienced problems with the Science Data Interface. Caused setback in testing schedule. Therefore, formal Acceptance Tests are still to be run. Scheduled for later this week.*
- *Liens list documented and to be worked. Document Reviews and formal testing among them.*
- *New Spin – due to cost constraints and capabilities apparent in AstroRT, MSFC is now planning more extensive use of GBM SIIS during their instrument I&T program. They've been briefed on the limited approach to maintenance of the SIIS. May investigate procuring their own spares – we'll stay on top of this...*

– *LAT: Acceptance Test scheduled for 5/27.*

- *LAT SIIS undergoing modifications to include LVDS signal discretes.*
- *LAT SIIS will undergo modification to include 'in-spec' 1 PPS signal. (GBM doesn't need it)*
- *Delivery date remains for end of May, but there will be a planned upgrade with these changes later in the summer. SLAC is fine with this approach (only using 1553 I/F until late in '03).*

– *Project Office Action: Flesh Out SIIS Maintenance Strategy*

- *Reviewed material from Spectrum documenting SIIS maintenance strategy.*
 - *Summary: "Please don't break"!*
- *Requested SLAC to prepare briefing on details of their planned SIIS use. Scheduled for Friday (5/2)*
- *Project office has agreed, in principal, to acquire some sparing for SIISs. Working definition of quantity and type/part #s.*
- *Spectrum Plans to Use the MOC Training Simulator (and early SDMS) Prior to Delivery as the SIIS Software Maintenance Environment*



Issues/Problems

► **LAT FSW**

- *Tight schedule. Portions of the development team need to produce code at 40 SLOC per day.*
- *Success path to I&T.*
 - *Very little if any schedule margin – critical path element as I read it.*
 - *No margin for errors / problems.*
- *Test Approach differs from typical GSFC planning – developers are unit test and build testers.*

► **GBM FSW**

- *None.*

► **SC FSW**

- *None. Working toward PDR.*

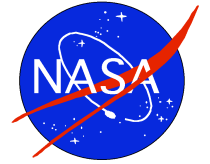


Upcoming Events

- ▶ **Kentucky Derby**
- ▶ **Spacecraft**
 - *SC and FSW PDRs*
 - *Document Reviews: GNC Requirements/Design Document.*
 - *SIIS: Document Reviews: User's Guide, Acceptance Test Plans / Version Description*
- ▶ **LAT**
 - *CDR*
 - *EM1 FSW Delivery to I&T 8/1/03*
 - *SIIS Delivery from Spectrum – May '03*
- ▶ **GBM**
 - *FSW Detailed Design / FSW Test Plan*
 - *SIIS Delivery from Spectrum – May '03*
- ▶ **GBM-LAT ICD**
 - *Project Office / Instruments (and Spectrum) Review*



Rolling Wave Schedule



- ▶ ***Included with SC and Instrument Rolling Wave...***